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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,611	11/13/2003	Theodore Bydalek	11-9540-6520-0000-2	9015

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EXAMINER

SHARP, JEFFREY ANDREW

ART UNIT

PAPER NUMBER

3677

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,611	BYDALEK ET AL.	
	Examiner	Art Unit	
	Jeffrey Sharp	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2005 and 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

[1] This action is responsive to Applicant's remarks/amendment filed on 17 November 2005 with regard to the Official Office action mailed on 17 May 2005.

Status of Claims

[2] Claims 1-47 are pending.

Drawings

[3] The drawings were previously objected for informalities. In view of Applicant's replacement drawings submitted on 17 November 2005, all previous objections to the drawings have been withdrawn. Accordingly, the changes have been entered. It appears that no new matter was entered.

Claim Objections

[4] Claims 19 and 27 were previously objected to because of informalities. Applicant has successfully addressed these issues in the amendment filed on 17 November 2005. Accordingly, the objections to the claims have been withdrawn.

Double Patenting

[5] The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Art Unit: 3677

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

[6] Claims 1-22 and 26-47 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,749,386 to Harris in view of Toth et al. US-5,302,069.

Harris already substantially discloses the nut and washer features except for a "retaining surface" on the nut configured to frictionally engage a press-fitted cap. The height of each undulating plateau disclosed is capable of being sized relative to any structural feature(s). In general, Toth et al. teach the improvement of providing an aesthetic/functional/protective cap (90) press-fitted¹ onto a retaining surface (30) of a nut (24). See Toth et al. Figure 6.

At the time of invention, it would have been obvious to one of ordinary skill in the art, to modify the nut taught by Harris, by employing a retaining surface and a cap configured to be pressed onto said retaining surface as suggested by Toth et al., in order to provide an aesthetically-pleasing fastener assembly and to provide the fastener assembly with a safeguard against corrosion.

¹ Toth et al. US-5,302,069, col. 4 lines 37-39.

Claim Rejections - 35 USC § 102

[7] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[8] Claims 1-4 rejected under 35 U.S.C. 102(b) as being anticipated by Bias US-5,082,409.

In short, Bias teaches a cap (10) over a nut (N) having a torque transmitter (S), said cap being engageable and receivable within a wrench, wherein the two are joined by an (broad) "interference fit".

[9] Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Cantrell US-4,784,555.

In short, Cantrell teaches a cap (20) over a nut (12) having a torque transmitter (sides of 12), said cap being engageable and receivable within a wrench, wherein the two are joined by an "interference fit".

Response to Arguments/Remarks

[10] Claims 1-22 and 26-47 were previously rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,749,386 to Harris in view of Toth et al. US-5,302,069.

Applicant's arguments/remarks with regard to this reference have been fully considered, but are not persuasive. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Applicant argues that Examiner has not provided a prima facie case of obviousness because Examiner allegedly "fails to teach a motivation to combine"², and allegedly combined two prior art references that would "change the operation"³. The Examiner takes the position that a prima facie case of obviousness *has been* properly established, the motivation of providing a cap pressed onto a retaining surface being for aesthetic reasons, and to prevent corrosion to the nut. Applicant has not provided convincing reasoning as to why the two references could not be combined.

Applicant further states that *"the nut of Harris is not provided with the first and second longitudinal portions as taught in Toth"*⁴ in an attempt to provide merit to the allegation that the Harris '386 and Toth et al. '069 references are not combinable. It is to be noted that Toth is a teaching reference, and the mere fact that Toth discloses additional structure not claimed is irrelevant.

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed

² Top line of remarks, page 16.

³ Remarks, page 16, line 6.

⁴ Remarks, middle of page 17.

Art Unit: 3677

invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller*, 642 F. 2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

[11] Claims 1-4 rejected under 35 U.S.C. 102(b) as being anticipated by Bias US-5,082,409.

Applicant's arguments/remarks with regard to this reference have been fully considered, but are not persuasive. Therefore, this rejection is maintained.

Applicant appears to contend that Bias fails to show an "interference fit" between a cap and nut. Examiner takes the position that when given its broadest reasonable interpretation, at least a portion of the cap (which may broadly speaking, comprise clip 30) taught by Bias "interferes" with a nut. Applicant does not claim an interference fit wherein, "the cap has an inner diameter less than an outer diameter of a retaining surface". Consequently, the term "interference fit" and/or "press-fit" has been interpreted broadly.

[12] Claims 1-4 rejected under 35 U.S.C. 102(b) as being anticipated by Cantrell US-4,784,555.

Applicant's arguments/remarks with regard to this reference have been fully considered, but are not persuasive. Therefore, this rejection is maintained.

In its broadest reasonable interpretation, Cantrell teaches a cap shaped according to a nut having a torque transmitter shaped to transmit torque, said cap being configured to (broadly) "cooperate with" (e.g., "touch") a wrench, and fit within a wrench.

Art Unit: 3677

However, after further consideration, the rejection of claim 4 under 35 U.S.C. 102(b) as being anticipated by Cantrell US-4,784,555 has been withdrawn. Although the cap taught by Cantrell could *theoretically* apply a torque to the nut via an undersized wrench through friction, such a limitation would not be readily apparent from the Cantrell '555 reference. It is understood that the cap taught by Cantrell would need more substantial means (e.g., through the use of flats) in order to provide a useful torque to the nut.

[13] Claims 5-17 and 33-47 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McKinlay US-5,626,449.

Applicant's arguments/remarks with regard to this reference have been fully considered, but are moot in view of the following Applicant's amendment. Applicant has amended the claims such that independent claims 5, 14, and 33 now call for a positively recited "cap", which McKinlay fails to suggest.

However, upon further consideration, a new ground(s) of rejection is made in view of Toth et al. US-5,302,069.

[14] Claims 1-4, 18-22, and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinlay US-5,626,449 as discussed above, in view of Toth et al. US-5,302,069.

Applicant's arguments/remarks with regard to this reference have been fully considered, but are not persuasive.

The examiner takes the position that although McKinlay fails to suggest a retaining surface and a cap press-fitted (i.e., having an interference fit) therewith, the Toth et al. reference

Art Unit: 3677

supplies the structure of a retaining surface and press-fitted cap, and provides sufficient motivation for making such a modification. Toth et al. state that a cap (32) provided on a retaining surface (18) of a nut (22) is both "decorative" and useful as protection from the environment (e.g., moisture and corrosive salt). The cap has torque transmitting capabilities, and is sized to be received within a wrench. One of ordinary skill in the art would appreciate that Toth et al.'s cap is "press-fit" or has an "interference fit" with a retaining surface (18) of a nut (22).

With regard to Applicant's allegation that Examiner has not provided a prima facie case of obviousness, all portions of the Graham v. Deere test have been clearly established. Applicant states "one skilled in the art would not be motivated to utilize the cap 22 of Toth with the nut 14 of McKinlay"...because "the nut 14 of McKinlay is not provided with the first and second longitudinal portions taught in Toth". The Toth reference is utilized as a teaching reference to show the advantages of providing a protruding "retaining surface" to a nut lacking a retaining surface, in order to accept a press-fit cap, said advantages being 1) cosmetic and 2) for protecting the nut from corrosion.

[15] Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinlay US-5,626,449 in view of Toth et al. US-5,302,069 as discussed above, in further view of Notaro US-5,324,148.

Applicant's arguments/remarks with regard to this reference have been fully considered, but are not persuasive.

Art Unit: 3677

Notaro generally discloses what is already well-known in the art, and is used merely as a teaching reference. The examiner takes official notice that portions intended for press-fitting are better suited when they are provided with knurls. Notaro, suggests that it would be obvious to one having an ordinary skill in the art, to employ a plurality of notches at an angle (which may comprise 0 and 90 degrees). Applicant's attention should be drawn to the previously cited NPL from the Machinery's handbook, which makes known providing a plurality of notches at an angle between 30 and 60 degrees.

New Grounds of Rejection

Claim Rejections - 35 USC § 103

[16] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[17] Claims 1-22 and 26-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinlay US-5,626,449 as discussed above, in view of Toth et al. US-5,302,069.

In short, McKinlay teaches a fastener assembly comprising: a nut (14) having a torque-transmitting surface(s) (24) configured to engage a wrench and an annular surface (27) comprising an undulating surface (26) having V-shaped undulations (peaks and valleys), and a washer (16) having a bearing surface (28), a clamping surface (30) having a plurality of protrusions (52), wherein said nut is configured and sized to receive a cap via an interference fit.

Note that McKinlay acknowledges that a height (e.g., height 50 of the V-shaped undulations 36) is related to thread spacing⁵.

Also note that McKinlay refers to Herpolsheimer US-5,080,545,⁶ who discloses peaks, valleys, and plateaus⁷.

Furthermore, although McKinlay prefers a plateau height slightly less than the thread pitch for facilitating cam-over and for reducing undue elongation of the threaded stud (40), McKinlay as well as those having an ordinary skill in the art would acknowledge that a greater height could be employed with greater expected "locking" results due to a greater inherent tensile loading of the stud⁸. Note that it has been held that a modification such as a mere change in size of a component would be obvious. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). See also, MPEP § 2144.04 which states: *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.). In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform

⁵ McKinlay US-5,626,449, col. 4 line 60 - col. 5 line 5.

⁶ McKinlay US-5,626,449, col. 1 lines 10-11.

⁷ Herpolsheimer US-5,080,545, elements 27, 28, and 29.

⁸ As evidenced by McKinlay US-5,409,338 column 2 lines 49-52

Art Unit: 3677

differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

However, McKinlay fails to disclose expressly, a retaining surface on the nut, and a cap shaped to be engaged with a wrench and press fitted onto said retaining surface.

Toth et al. suggest a "retaining surface" (30,32) on a nut (24) of a fastener assembly having a frictional surface to receive a cap (22,90). The cap may be press-fitted on⁹. The torque-transmitting surface may be engaged without engaging the cap¹⁰.

At the time of invention, it would have been obvious to one of ordinary skill in the art to employ a retaining surface to the nut taught by McKinlay, in order to provide a press-fit surface for attaching a protective or decorative cap to said nut, as suggested by Toth et al., in order to improve the aesthetics of the fastener assembly, and/or in order to protect the fastener assembly from corrosion.

[18] Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinlay US-5,626,449 in view of Toth et al. US-5,302,069 as discussed above, in further view of Notaro US-5,324,148.

In short, McKinlay v. Toth et al. substantially teaches a fastener assembly comprising: a nut having a torque-transmitting surface(s) configured to engage a wrench, a retaining surface for accepting a cap, and an annular surface comprising an undulating surface having V-shaped

⁹ Toth et al. US-5,302,069, col. 4 lines 37-39.

¹⁰ Pertinent to instant claim 27.

Art Unit: 3677

undulations (peaks and valleys); a washer having a bearing surface, a clamping surface having a plurality of protrusions; and a cap press-fitted onto said retaining surface of said nut (see above).

However, *McKinlay v. Toth et al.* fails to disclose expressly, the cap and/or retaining surface of the nut having a plurality of notches.

Notaro broadly discloses "knurls" (14,19) (i.e., "plurality of notches") on both a cap (13) and fastener (10) so as to alleviate disadvantageous shaving, excessive material flow, and cocking during press fitting¹¹. The examiner takes official notice that it is known to provide knurls to press-fit objects, and that it is also well-known to provide knurls (herein, "plurality of notches") at an angle between 30 and 60 degrees, as evidenced by the previously cited *Machinery's handbook* NPL.

At the time of invention, it would have been obvious to one of ordinary skill in the art, to modify the retaining surface of the nut and the mating inside surface of the cap taught *McKinlay v. Toth et al.*, by employing a plurality of notches for an improved interference fit.

Note that specific angles of said knurls disclosed by Applicant would be considered an obvious modification of Notaro by those having an ordinary skill in the art¹².

Conclusion

[19] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

¹¹ Notaro US-5,324,148, col. 2 lines 19-27.

¹² As evidenced by cited NPL 26th ed. *Machinery's Handbook*.

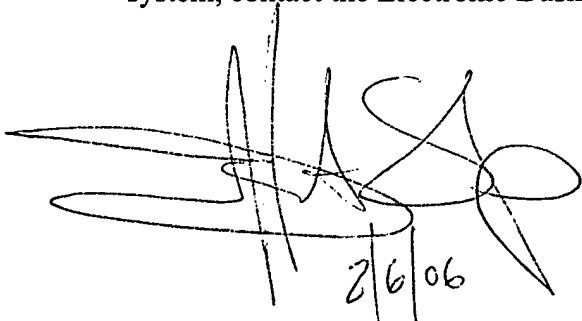
Art Unit: 3677

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

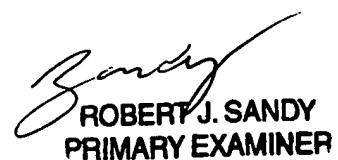
[20] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sharp whose telephone number is (571) 272-7074. The examiner can normally be reached 7:00 am - 5:30 pm Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



2/6/06



ROBERT J. SANDY
PRIMARY EXAMINER